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ABSTRACT

Major developments are occurring worldwide that have brought about an interdependent global economy. At the same time, demographic changes are reshaping the American work force. How we respond to these forces will shape our nation's viability and well-being. Ultimately, success in economic competition is determined in the workplace. Many of our businesses face the need to modernize, restructure how work is done, and better use technological advances to compete effectively. The resulting increase in skill demands will place a high priority on workers' abilities to adapt to new methods of operation and to acquire new skills. With future work force growth dependent upon recruiting traditionally underrecruited groups such as women, minorities, and immigrants, new approaches to human resource management will be required. Many American businesses are already addressing these socioeconomic shifts through integrated business planning, resource allocation, and human resource development. Similarly, states must bring together their education, employment and training, and economic development systems. (RJS)

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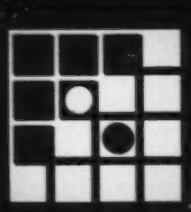

EXCELLENCE AT WORK THE ISSUES

Committee on Economic Development & Technological Innovation

Committee on Human Resources

Center for Policy Research

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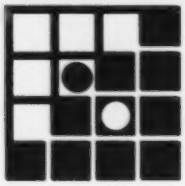

EXCELLENCE AT WORK: THE ISSUES

NATIONAL GOVERNORS' ASSOCIATION

Committee on Economic Development & Technological Innovation

Committee on Human Resources

Center for Policy Research

The National Governors' Association, founded in 1908 as the National Governors' Conference, is the instrument through which the nation's Governors collectively influence the development and implementation of national policy and apply creative leadership to state issues. The association's members are the Governors of the fifty states, the commonwealths of the Northern Mariana Islands and Puerto Rico, and the territories of American Samoa, Guam, and the Virgin Islands. The association has seven standing committees on major issues: Agriculture and Rural Development; Economic Development and Technological Innovation; Energy and Environment; Human Resources; International Trade and Foreign Relations; Justice and Public Safety; and Transportation, Commerce, and Communications. Subcommittees and task forces that focus on principal concerns of the Governors operate within this framework.

The association works closely with the administration and Congress on state-federal policy issues through its offices in the Hall of the States in Washington, D.C. The association serves as a vehicle for sharing knowledge of innovative programs among the states and provides technical assistance and consultant services to Governors on a wide range of management and policy issues.

The Center for Policy Research is the research and development arm of NGA. The center is a vehicle for sharing knowledge about innovative state activities, exploring the impact of federal initiatives on state government, and providing technical assistance to states. The center works in a number of policy fields, including agriculture, economic development, education, environment, health, social services, training and employment, trade, and transportation.

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Chairmen's Overview

The building of sound, competitive state economies will depend upon successful economic and human resource development strategies that converge in the workplace to produce excellence at work. As chairman of the Economic Development and Technological Innovation Committee and vice chairman of the Human Resources Committee, we are particularly interested in the interplay of economic and workforce policies. Consequently, we have initiated "Excellence at Work," a project that will focus on the state role in bringing about many of the fundamental changes needed to maintain our status as the most productive nation in the world.

We have initiated Excellence at Work because major developments are occurring worldwide that have brought about an interdependent global economy. At the same time, demographic changes are reshaping the American workforce. How we respond to these forces will shape our nation's viability and well-being. Ultimately, success in economic competition is determined in the workplace.

Many of our businesses face the need to modernize, restructure how work is done, and better utilize technological advances to compete effectively. The resulting increase in skill demands will place a high priority on workers' abilities to adapt to new methods of operation and to acquire new skills.

With future workforce growth dependent upon recruiting traditionally underutilized groups such as women, minorities, and immigrants, new approaches to human resource management will be required. American business is already responding to these changes by coordinating their business investment and human resource development strategies. Similarly, states must bring together their education, employment and training, and economic development systems.

The Partnership. The primary goal of Excellence at Work is to delineate the appropriate roles and options for state government to improve excellence in the workplace. The nation's Governors will undertake this initiative in partnerhip with business, education, and labor leaders.

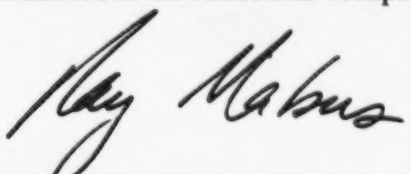
The Product. Excellence at Work will assist states in developing legislative and administrative agendas to improve their human resource and economic development policies. An action plan will recommend state strategies that contribute to a quality workforce and facilitate business efforts to become more competitive and productive.

The Process. Excellence at Work is a three-phase project. The first phase includes the appointment and convening of the Governors' Forum on Excellence at Work, composed of national business, labor, and education leaders. Members will provide advisory leadership throughout the course of the initiative.

During the second phase of the project, we will host a series of roundtable discussions in our home states of Mississippi and Rhode Island. National experts in business, labor, education, training, and economic development will be invited to exchange information and ideas.

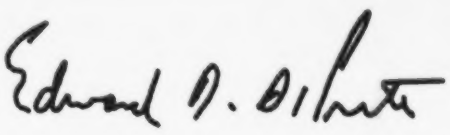
During phase three, we will host a second meeting of the Governors' forum to review the findings and recommendations of the roundtables and to discuss the most effective state policy options for inclusion in the final action plan for states.

We believe Excellence at Work will make an essential contribution in ensuring excellence in the American workplace.



Governor Ray Maybus, Mississippi
Co-chairman, Governors' Initiative on Excellence at Work

Chairman, Committee on Economic Development and Technological Innovation



Governor Edward D. DiPrete, Rhode Island
Co-chairman, Governors' Initiative on Excellence at Work

Vice Chairman, Committee on Human Resources

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David Bedford, senior policy analyst with the NGA Center for Policy Research, served as primary researcher and author. Others at NGA who made important contributions include Barry Van Lare, deputy executive director; Alicia Pelrine, director of the Human Resources Committee; Tim Masanz, director of the Economic Development and Technological Innovation Committee; Evelyn Ganzglass, director of the Training and Employment Program; Marianne Clarke, director of the Economic Development, Science and Technology Program; and Sally Sachar, senior policy analyst, Human Resources Committee. Editorial support was provided by Gerry Feinstein, Karen Glass, and Mark Miller.

Special thanks also are extended to Barbara Dyer, director of policy studies, and Mark Popovich, senior staff associate, of the Council of State Policy and Planning Agencies.

Foreword

Global economic changes and national demographic trends shaping America's future ultimately converge in the American workplace. The Governors' Initiative on Excellence at Work will assess the diverse pressures affecting the U.S. economy and labor market, explore existing public and private sector responses, and recommend integrated economic development and human resource development strategies to promote excellence in the American workplace.

Major developments are occurring worldwide that have brought about an interdependent global economy. Juxtaposed against these global economic forces are the demographic changes reshaping the American workforce. Many of America's leading businesses are already addressing these socioeconomic shifts through integrated business planning, resource allocation, and human resource development. This publication, the first in a series, discusses the strategic responses of the business community and the corresponding changing demands upon the labor force. The changes occurring in the American workplace raise a number of specific issues on which government can have an influence. These public policy questions, which are the focus of the Governors' initiative, are discussed with respect to their importance to state economic development and human resource development planning.

1. The Changing Economic Environment

America enjoyed economic dominance in the post-World War II era. Its economic growth was fueled by plentiful natural resources, relatively cheap and abundant sources of energy, control of the largest and richest unified market for goods and services in the world, and a growing labor force with the skills needed for production. But over the past twenty-five years, these advantages have eroded.

The introduction of synthetics has reduced the economic importance of many natural resources. As national demand outstripped energy production, the United States, like its competitors, became dependent on others. The redevelopment of the West European and Japanese economies and the emergence of the new industrial powers of the Pacific Rim, which have substantial export capacity, have lessened U.S. business control of the domestic market. Today important sectors of the domestic market have turned to the high quality, finished products of U.S. competitors. Finally, the baby boom of the post-World War II era has given way to a baby bust, slowing labor force growth and producing labor and skill shortages.

Global competition, accelerating technological change, instantaneous communication, and relatively cost-efficient transportation have transformed the world into a global economic village. America's response to these forces must be developed within the context of the American culture, which is diverse, pluralistic, and decentralized. The U.S. economy is a constellation of local economies and local labor markets. The nation's system of human resource development also is locally based. Coordinating this diversity and focusing America's creativity on these serious challenges is the goal of the Governors' initiative.

The workplace is where success in economic competition ultimately is decided. Changes in business practices to ensure success will require advanced skills, adaptability, and flexibility. Simultaneously, business will want a dependable, trained workforce for future economic expansion. The emerging pressures forcing changes in the way America works are too multifaceted and complex to be addressed by a single sector. Productive, competitive workplaces will be the result of a partnership among business, labor, education, government, and others dedicated to high standards of excellence.

Within the U.S. federal system, states are key to establishing partnerships to successfully orchestrate the response of America's decentralized economy to the continuing demands of a global economy. States have primary responsibility for elementary and secondary education systems, which are critical to the preparation of the workforce. Moreover, state universities are a major provider of professional and

specialized skills, while community colleges have been leaders in developing customized educational services for business. "Second chance" education and training programs and vocational/technical education administered and operated by the states are the primary government vehicle for the continuing education and training of workers.

At the same time a wide array of state services for business development and diversified capital assistance programs, coupled with targeted tax incentives, have established states as limited partners in business expansion and development. Because of their experience with economic and human resource development systems, Governors are well positioned to conduct the reevaluation, restructuring, and reinvigoration of public policy to reestablish the United States as the undisputed world leader in productivity, innovation, and economic excellence.

The Challenge of a Global Economy

The international forces reshaping the economic environment in which the American entrepreneur and worker must compete are characterized by four major trends:

- Internationalization of markets;
- Accelerating technological advances;
- Cost-efficient transportation; and
- Information and communication advances.

These trends will dictate economic viability in the twenty-first century and frame business and government policy discussions.

Internationalization of Markets. Historically, U.S. business dominated an expanding, homogeneous domestic market, with few competitors for goods or services. However, the resurgence of European and Asian industrial power led to international penetration of the world's largest unified market. It forced American enterprise to compete on its home turf. For the first time, U.S. business is threatened with the loss of significant sectors of the $5 trillion domestic market.

The strong dollar, coupled with foreign government support in targeted industries, partially explains the early success of U.S. competitors. Imports as a percentage of GNP have risen from less than 5 percent in 1950 to 10 percent in 1980 with a dramatic rise to 15 percent in 1986. Foreign nations now supply 29 percent of the automobiles, 95 percent of the consumer electronics, and 18 percent of the banking and insurance services provided in the American market.

While dominance in the domestic market has been eroding, America has not kept pace with other nations in penetrating overseas markets. Exports as a percentage of GNP have fallen steadily since 1980. The American share of the world automobile market dropped from 27 percent in 1975 to 17 percent in 1983. The United States faces a unique challenge because there is no external market of comparable size, wealth, and ease of entry (i.e., single language, national government, and integrated communication) to which U.S. business can direct its exports.

Although the United States remains the most productive nation in the world, its productive advantage has lessened compared with major international competitors over the past three decades. From 1975 to 1980, U.S. productivity rose 1.7 percent per year while West German productivity rose 3.8 percent and Japanese productivity rose 8.6 percent. Some of this increase resulted from innovations and modernization of the manufacturing process. Improvements in productivity must be accelerated for the United States to remain competitive with other leading industrial nations.

The internationalization of markets means that American enterprises can no longer concentrate on competing with one another, or on simply improving last year's bottom line. Economic success will depend upon improvements in productivity and the quality of goods, and upon the ability to take goods to market. American enterprise will need to develop a global perspective, multicultural understanding, and mastery of international business practices.

Accelerating Technological Advances. Innovation, deployment, and commercialization of new technologies have fueled world economic expansion in the post-war era. Dramatically shortened life cycles of technological advances means that the successes achieved do not have the same impact as ten or twenty years ago. The pace of this change is continually quickening. Examples of technologies that will continue to alter the economic environment include:

- Miniaturization in information processing, which has put powerful computers on individual worker's desks, is now putting fax machines in cars and offering affordable means of moving the workplace anywhere within reach of a telephone.
- Fiber optic communications, which has created new products and made possible an integrated financial community, will soon be capable of carrying international marketing channels for retail as well as wholesale products.
- Advanced materials, which have revolutionized industries formerly dependent on natural resources such as aerospace and sports equipment, will continue to provide breakthroughs as diverse as high temperature ceramic engines with low pollutants or superconducting materials that can radically reduce electricity consumption.
- Biotechnology, which will bring major changes to the international food supply and health care systems.

Once the undisputed technological leader of the world, the United States has not been as fast as its competitors to commercialize technological advances. While the United States spends more on research and development than its competitors, commercially applicable research lags behind that of other leading economic powers. In 1987, on non-defense research the United States spent 1.7 percent of GNP, compared with 2.6 percent in West Germany and 2.8 percent in Japan.

Cost-efficient Transportation. Contributing to the emergence of multinational production is the continuous development of more cost-efficient transportation. Containerized cargo, warehouses on wheels, air cargo, and supersonic transport have facilitated the movement of components across national boundaries for assembly, and

export of finished products into international markets. Domestic products increasingly incorporate multinational processing and foreign-produced components, representing the combined efforts of an international workforce. Advances in transportation have fundamentally altered the location and selection of suppliers, their relationship to assemblers, and the targeting of markets for distribution. Quality and responsiveness rather than proximity of suppliers are now emphasized. No longer are markets restricted by geographic or physical barriers.

Information and Communication Advances. As a result of the information and communication revolution, new production processes have been introduced and new products and industries have been created. Technological advances also are disseminated more quickly. Instantaneous worldwide communication has revolutionized business decisionmaking and financial markets. Complex computer applications, available only to large corporations a generation ago, are now readily accessible to small businesses.

The Challenge. The global trends that are creating an increasingly [illegible] international economy cannot be altered by the U.S. government or state governments or American business. However, these forces are causing American enterprise and public policymakers to reevaluate how work is conducted and how workers are prepared. As technology, transportation, and information and communication advances accelerate and alter the international economic climate, business and public institutions must develop successful strategies to respond to these changing realities.

The Changing American Workforce

At a time when American enterprise is making adjustments to meet the challenges of an internationally competitive economy, dramatic changes are occurring in the American labor market. Efforts by business to reposition itself will be dependent upon the quality, adaptability, and productivity of the American labor force. However, national demographic trends will affect markets for workers, influence the flexibility of the workforce to adapt and relocate, and alter traditional employment relationships. Successful economic strategies must account for the fundamental changes brought by:

- Projected labor and skill shortages;
- An aging workforce;
- Increased participation of women; and
- Greater reliance on minorities and immigrants.

Labor and Skill Shortages. Over the next decade, the U.S. workforce will grow at its slowest rate since the Depression years. The decline in the birthrate that began in 1960 will lead to general labor shortages that will increase throughout the next two decades. The north central region of the United States will lose 22 percent of its population in the critical twenty- to thirty-four-year-old age bracket between 1980 and the end of the century. Internal shifts of population and business to the South and Southwest and away from urban centers will create more intense labor shortages in some regional, state, and local labor markets.

In an era when increased productivity is inextricably tied to technological advances, the United States faces impending shortages over the next two decades in those entering science, engineering, and the technical skill trades. At the same time, large numbers of scientists and engineers who entered their fields in the post-Sputnik era will be retiring. Other specialized skill areas will experience shortfalls such as technical personnel and language teachers who are essential to equipping the workers with the skills necessary to communicate in a globally integrated economy.

Increasing the number of workers in the U.S. labor force will require incorporating segments of the population currently underutilized, with women, minorities, and immigrants comprising a larger portion of new job entrants. Skill shortages must be addressed by vigorous recruitment and training among these groups in high-demand occupations.

The Aging Workforce. The primary age group for new workers, persons between twenty and twenty-nine years of age, will decline from 41 million to 34 million by the turn of the century. The average age of the American worker during this period will rise from thirty-five to thirty-nine years. Consequently, at a time when business must become more flexible, changes in the composition of the workforce might work against it. Older workers may be less inclined to job relocation or major career changes, while a lack of young workers may restrict opportunities to rely on new labor market entrants to fuel expansion and change. While older workers bring the benefits of experience and maturity to the job, they also have higher work-related costs including salaries, pensions, and health benefits. Family responsibilities of older workers may require dependent care for disabled spouses or increase the demand for part-time or periodic employment.

Increased Participation of Women. By the year 2000, 61 percent of all American women will be at work, comprising 47 percent of the labor force and 60 percent of new job entrants. The influx of women into the permanent labor force has fundamentally altered traditional family responsibilities. More than 60 percent of married women with children participated in the workforce in 1984. Workplaces will have to be responsive as both men and women balance work and family roles. Part-time jobs, flexible work hours, and stay-at-home jobs are beginning to increase, with a corresponding decline in total hours worked per employee. Parental leave, child care, and elder care are becoming increasingly important workplace issues.

Greater Reliance on Minorities and Immigrants. Blacks and Hispanics will constitute a larger share of labor force growth, accounting for 29 percent of net labor force additions between 1985 and the year 2000. While this provides opportunity to groups traditionally underutilized in the workforce, there are lingering impediments to fully incorporating these segments of the population into the labor market. Minorities are currently overrepresented in occupations that have lost employment over the past decade, portending dislocations that exacerbate the effects of poverty and marginal employment. Frequently concentrated in declining urban areas, blacks and Hispanics are experiencing the ill effects of numerous, complex social problems. Historically, lower investments in education and skill development have resulted in lower achievement levels on educational measures and lower school completion rates at both the secondary and postsecondary levels. As a result, some members of these populations are poorly equipped for success in a more demanding labor market.

Strategies to address these deficits must be given further attention as the nation cannot afford to waste a single worker.

The decade of the 1980s experienced the greatest influx of immigrants since the beginning of this century. If this trend continues, immigrants could account for half of the population gain over the next decade and represent a major resource for workforce expansion. As a nation of immigrants, the United States has benefited in the past from the economic contribution of newcomers who bring new energy, dedication to hard work, and cultural diversity to the workplace. Many immigrants possess critical skills while others initially lack both job and language skills necessary for work or skill development. For the U.S. economy to fully capitalize on this new human resource, the nation will have to speed the adjustment of these new workers, facilitate their transition to the American workplace, and respond positively to their unique cultural backgrounds.

2. The Strategic Response of American Business

Driven by the challenges of a globally competitive economy, new market conditions, and demographic trends, the American business community is reevaluating and restructuring its productive processes. The response of American enterprise has been characterized by three distinct, yet interdependent strategies:

- Modernization;
- Commercialization of technology; and
- Development of human resources.

An effective response by American business will require continual readjustment to maintain a competitive edge.

Modernization

U.S. businesses are modernizing their operations. This includes integrating computers into manufacturing processes, improving quality control and product planning, utilizing just-in-time inventory techniques, and establishing new relationships with both suppliers and employees. Taken together such actions are designed to make production more efficient, more flexible, and of higher quality. In pursuit of improved product quality, business is forging new relationships between management and labor, sales and production, and design and processing. Employment relationships are being redefined to provide for greater market responsiveness through the development of nontraditional work structures. This is evidenced by the growing use of contract workers to meet peak production schedules or project-specific tasks.

As business strives for more productive and flexible work processes, greater demands will be placed upon workers than in a traditional assembly line. Job clustering and workcell production, for example, require workers to learn and understand a broader range of skills and techniques. Development of teams requires employees to understand the full workings of the enterprise from design to manufacturing, through sales and marketing. The blurring of distinctions between management and labor in the decisionmaking process requires employees to take personal responsibility for the quality of products and services and to become involved in the profitability of the business.

Commercialization of Technology

To remain competitive, U.S. firms must continually increase the speed with which they adopt new technological processes and introduce new products. Business and govern-

ment will need to make greater investments in commercially applicable research and development, with more rapid transfer and deployment. The rapidity of technological change has reduced the competitive advantage of initial breakthroughs to months rather than years.

Technological change requires a workforce that is adaptable to learning new machines, techniques, and processes, and is sufficiently knowledgeable to contribute to future improvements. An adequate supply of scientists and engineers will be critical. Training will become an ongoing process, increasingly centered in the workplace. Management will need to become better attuned to changes in technology, understand the advantages of commercialization and deployment, and accept the need for continuous and rapid technological upgrade.

Development of Human Resources

There is a growing awareness among business leaders that economic competitiveness is dependent upon the skills and talents of the workforce. A survey of business, academic, and government leaders conducted by the National Governors' Association and the Conference Board found that all three groups thought education was the key to the future competitiveness of the U.S. economy. The development and maintenance of science, engineering, and technical personnel was rated as the most critical issue for competitiveness by all three groups. Business demands greater skill levels for entry-level workers, whether blue collar or white collar, and requires continuous upgrade of employee skills and knowledge to keep abreast of international competition.

3. The Changing American Workplace

As the U.S. business community implements its competitive strategies, numerous economic, human resource, and social issues will arise in the American workplace affecting the degree to which such strategies will succeed. The most productive and innovative businesses seek an integration of human resource development, modernization, and technological advances. Government frequently has been less farsighted, conducting human resource and economic development policies and programs on parallel but separate tracks. Development of a comprehensive public policy that addresses the appropriate government role in facilitating a transition to more productive workplaces is essential to American economic resurgence.

State public policy must be sensitive to the degree to which states can influence workplace issues. Many of the issues that influence the U.S. economy remain exclusively within the domain of private enterprise. Business will lead the implementation of new work organization and introduction of technology, although the public sector can facilitate these activities. While business invests billions of dollars each year in training programs, the preparation of the American workforce remains primarily in the realm of the public sector. Other workplace issues, such as labor market exchange, require a mix of direct and indirect approaches by government. A few of America's largest corporations are addressing these issues. Yet small businesses, which lead in innovation and job growth, frequently lack the resources to duplicate these model programs. The degree to which states can directly influence workplace issues will therefore depend upon varying circumstances and resources. The issues affecting employers, workers, and states generally fall into four categories: work structures, training for the existing workforce, workforce preparation, and employment support.

Work Structures

Successful companies will focus on the value-adding properties of the way work is organized, the structure of jobs, and the productive contribution of individual workers. To develop more flexible workplaces that are responsive to changed market demand and competitive realities, business has begun to explore its methods of organizing work. Business organizations will be characterized in coming decades by greater specialization, flexibility, and flatter organizational structures that provide autonomy to work units and empower employees to take greater responsibility. Employers will need to involve employees to ensure the acceptance of new approaches and support for future workplace change.

Work Organization. Companies have begun to reevaluate the effectiveness of the way work is organized from the production line to the decisionmaking structure. Firms are moving away from vertical organizational problemsolving to "team" approaches, which comingle key functions related to a problem. Selection of suppliers is shifting from "low bid" to "high quality," and new supplier relationships stress interaction to streamline supply lines and reduce inventories. Production layouts are being reorganized into machine clusters based on the part produced, the customer, or the product type rather than on machine type. Management expert Tom Peters notes that, "Change in the structure of the organization and in decades-old attitudes must precede or at least parallel technology's application."

Such changes in the way work is organized produce corresponding changes in demands for human resource development. Employees must develop deeper and broader skills as they master a number of specific jobs in a job cluster while developing the skills necessary to participate in team decisionmaking. As production workers become involved in product design and engineers become involved in production, employees will need to be multifunctional. The most competitive work structures will be those that constantly change in response to market demands. Competitive firms will couple responsive work structures with the development of higher-order learning skills among workers so employees can assume broader responsibility and adapt to improved organization of production.

Flexible Work Structures. Business will face two seeming contradictions in maintaining a dedicated workforce. It must have the flexibility to fluctuate employment according to market demands, yet develop a stable, experienced workforce. To recruit and retain stable employees among certain segments of the labor force – such as workers who balance their job with family responsibilities, single heads of households, and older workers seeking partial employment – employers will need to explore flexible working hours, job sharing, and work-at-home job structures. To reduce the effects of rising and falling employment typical of many sectors of the economy, it is likely that firms will move toward a core of employees supplemented by contract workers to meet peak demand and specific projects. Short-time compensation may be used to ease the effects of layoffs and to maintain an attachment to workers needed during the next full production up-cycle. These nontraditional employment relationships will be necessary to ensure an adequate labor pool and to meet the demands of a more diverse workforce.

Employer-Employee Relationships. To facilitate the changes in work structures and generate support and acceptance by workers, employer-employee cooperation is essential. Such cooperation requires respect for employees' rights and for employers' competitive needs. Quality circles are a useful tool in the identification of process and product quality improvements. Labor-management committees organized to address noncollective bargaining issues can facilitate worker retraining to keep up with workplace change, mediate the implementation of job changes, and ease the readjustment of workers in cases of layoffs. Quality of worklife programs can improve workers' attitudes, productivity, and commitment. In an era of job enlargement and team building that stresses the need to enhance the skills of workers, employee participation in the design and implementation of change can determine the success of reorganized work structures. Effective methods of communication and cooperation between employers and employees will be essential to achieving American economic resurgence.

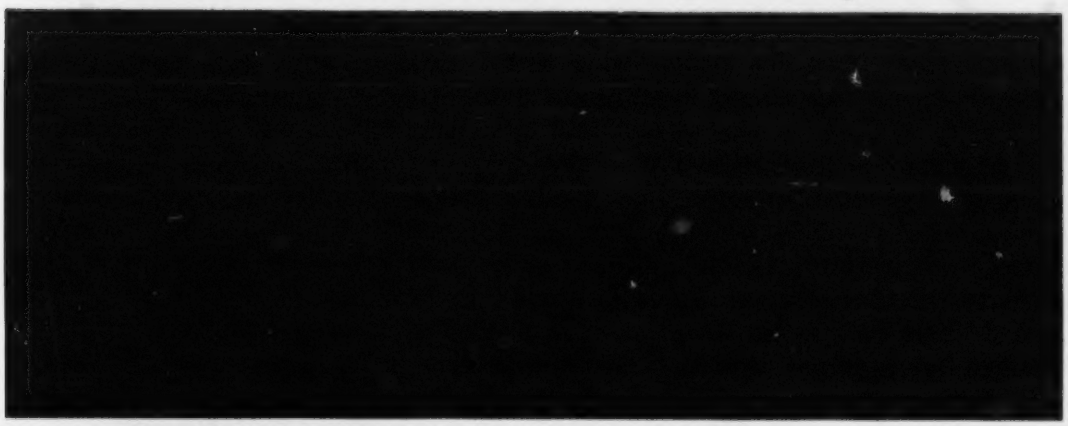
Training the Existing Workforce

In an American workplace undergoing modernization, restructuring, and accelerating technological change, workers with adaptable skills and the capacity for retraining are a prerequisite for success. To reap the economic rewards in the coming labor market, workers must engage in continuous upgrading of their skills and knowledge. Creation of a world-class workforce cannot be achieved solely by educating youth, but requires upgrading the skills of the current workforce. Indeed, 80 percent of the workforce of the year 2001 is already in the labor market. The pressure for lifelong learning affects all workers from the shop floor to the executive suite. The skills of a software engineer have a half-life of only two and a half years and those of an electrical engineer only five years. The internationalization of markets will require business facility in foreign languages, cultures, and business practices. Executives must continually educate themselves to the value-adding properties of new technologies and techniques so their enterprises stay market-responsive in the ever-changing internationally integrated economy. To meet the needs of businesses and workers alike, training and education

must be financially accessible, responsive to the marketplace, and provide – to those who need it – the fundamental learning skills necessary to pursue additional training.

Financial Resources. Notwithstanding the billions of dollars American private enterprise spends annually for formal training, only 11 percent of workers receive formal training and only 14 percent receive informal employer-sponsored training to prepare them for their jobs and improve their job-related skills. While employers spend 10 percent of the initial cost of new machinery for equipment maintenance, only 2 percent of personnel costs are dedicated to the maintenance of workers' skills. Thus, while private enterprise has made a sizeable commitment in absolute expenditures to the provision of training, the coverage of that training is limited and access is disproportionately provided to those who already possess higher level skills. To gain access to many federally supported training programs, persons must have income at or below the poverty level, be unemployed, or in receipt of a notice of termination. While government heavily subsidizes the cost of postsecondary education, workers at the lower end of the economic scale may still be unable to assume even the marginal expense of advanced learning. The public-private network of education and training provides access to lifelong learning primarily to those with the most information about opportunities and those most capable of assuming the costs of training and education.

The public-private system of adult training and education needs to be structured to ensure the broadest possible access. Business must be able to expand its investment in the skills of its workers to increase their productivity. Lacking sufficient financial resources for training, small businesses will need vehicles to ensure the acquisition of competitive skills by their workers. Greater access to career development and training is increasingly important for persons who are seeking employment security or economic advancement. The common interests of employers, employees, and society to gain greater productivity through skill development is dependent upon a comprehensive resource network to train and educate the existing workforce.



Market-Responsive Training. Training and education programs for the existing workforce must be responsive to the demands of both business and workers. Such programs must provide workplace-relevant skill training that corresponds to job requirements. The skill levels of workers must meet employers' expectations. Further, education and training programs need to become more responsive to the skill requirements of emerging occupations and technological innovation, incorporating new and changed skills into the curriculum in a timely manner. Ultimately, education and

training systems have to be accountable to both worker and employer, ensuring that persons trained have mastered the skills that are required in a competitive work environment. Quality, responsive training requires the input of business in the development of curriculum and course content. Programs should be based on work-related competencies, benchmarks of achievement, and standards for excellence that accurately reflect the demands of competitive workplaces.

Education and training opportunities need to be more flexible in terms of schedule and location. Programs must be offered in nontraditional time schedules, including before and after work and on weekends. Locating instruction and training facilities near or at the work site expands access and has proven to increase voluntary participation by employees. Combining work-site instruction, flexible hours, and job-related training and education are proving successful for a number of innovative firms.

Fundamental Learning Skills. The ultimate barrier to skill development facing employers and many workers is the lack of a sound educational foundation and the basic learning skills necessary for advanced learning. As business demand for new skills increases and as firms eliminate noncompetitive production processes, those workers with the least occupational and educational skills will find their jobs rendered obsolete. There may be as many as 40 million adult Americans with some functional educational deficiency that affects their ability to work at full potential. Consequently, those workers who face the greatest need for new skills and retraining are those without the fundamental learning tools for advanced skill development. Competitive business pressures will squeeze out low-skill, low-productivity jobs and workers. However, impending labor shortages mean that business cannot afford to lose willing and experienced workers. Systems for workplace literacy and fundamental learning skills must be available to workers who need them.

Workforce Preparation

Developing a world-class American workforce will require a major emphasis upon equipping those persons not already in the labor market with the skills necessary to compete successfully. Workers who possess quality basic educational and learning skills are the foundation of a productive workforce. Business requires a pool of new job entrants who are capable of performing within the work environment, mastering essential job skills, and demonstrating the ability to take advantage of advanced training and skill upgrading. New entrants, including those entering the professional and managerial ranks, must begin employment with an understanding of workplace requirements and be prepared to meet its demands. Workers lacking learning skills necessary for advanced learning and skill acquisition or lacking an understanding of workplace demands will be less productive and face a lifetime of uncertainty, marginal employment, and economic hardship. Effective systems of workforce preparation must provide every person with basic educational and learning skills, develop sufficient numbers of persons with the specialized skills essential for future economic growth, and prepare new job entrants for the transition to work.

Basic Educational Skills. The confluence of business, workforce, and societal interests may be strongest with respect to the basic educational skills provided to the future workforce. The education and skill requirements of emerging occupations will rise, with more than half of the new jobs between now and the end of the century requiring some education beyond high school and a third requiring college degrees. American youth are deficient on a number of skill indicators in math and science compared with those in other industrialized nations. As the United States strives to succeed in an integrated international economic community, U.S. students demonstrate a lack of basic geographic, language, historical, and economic knowledge.

Demographic trends, coupled with a growing economy, will lead to increased labor force participation by minorities, particularly blacks and Hispanics. However, these groups are experiencing low levels of educational achievement. Among twenty-one- to twenty-five-year-olds, 47 percent of blacks and 29 percent of Hispanics have reading skill levels below the eighth grade. Further, the intergenerational educational deficiencies associated with poverty and single-parent households disproportionately affect these groups.

Universal economic opportunity can be achieved only if fundamental education and learning skills are mastered by every youth. Providing the future workforce with the basic foundation for individual and societal success will necessitate business and education partnerships to restructure the basic content and standards of the school curriculum.

Specialized Training. America faces a number of critical skill shortages that are fundamental to its future economic viability and welfare. Significant national and localized skill shortages already exist in some health care professions and teaching specialties. The National Science Foundation foresees a shortfall of 560,000 scientists and engineers in the year 2010. Preparation for such careers begins early in the learning cycle of youth and will require the development of early interest among students as well as targeted recruitment. Historically, those groups that will comprise the largest segments of future labor force growth – women and minorities – are underrepresented in these fields. A congressional panel projects that the nation's demand for doctoral degrees in science and engineering will require three times the number of white women, twelve times as many blacks, and twenty times as many Hispanics completing that level of education. The panel urges local school districts to establish math and science experts in each elementary school and to emphasize scientific careers as the best way out of poverty for the economically disadvantaged.

Successful competition in a global economy will require greater understanding of other cultures, better comprehension of international and national financial relationships, and increased facility with foreign languages. Insufficient development of such specialized skills will create barriers to the development of international markets and an inability to fully appreciate the economic opportunities of multinational business cooperation. The United States currently is at a distinct disadvantage compared with its international competitors in the development of cross-cultural skills. American youth are required on average to take one to two years of foreign language instruction while the Japanese require six years in foreign language studies. Further, 53 percent of U.S. postsecondary students take no foreign language courses during their undergraduate years.

Transition into the Labor Market. A basic understanding of work and the workplace is essential for a worker's success in the labor market and productivity in the workplace. While other advanced industrial countries have mechanisms for transitioning students from school to work, the United States does little to prepare students for the work environment. Secondary educational institutions tend to focus on moving students into higher education. Those students not planning postsecondary

attendance are left to navigate the employment market unassisted. For most non-college-bound youth, early work experience is in the secondary labor market, which is characterized by low wages and high turnover. Such marginal employment provides a weak basis for future work and career development. America's international competitors, such as West Germany, facilitate the utilization of young workers through highly developed systems of apprenticeship.

In addition to school-to-work transition, the United States has a large number of non-working or marginally employed persons who are in need of work transition to enhance their on-the-job productivity and chances for sustained employment. Welfare recipients entering the labor market frequently lack an understanding of the world of work and the business environment, both of which are essential for their adjustment to employment. Displaced homemakers or women entering the labor market for the first time frequently experience a difficult adjustment period. Marginal workers, who have a loose attachment to the labor market characterized by sporadic employment, frequently have problems rooted in an inability to make the work transition or patterns of failure that require a reacclimation to the work environment.

Employment Support

A fundamental change has taken place in traditional concepts about individual responsibility for factors contributing to a worker's ability to fully participate in the labor force. Until recently, transportation, family responsibilities, and health care were viewed as external to the employment relationship. Changing socioeconomic circumstances are forcing a reevaluation of employment support. The need for a growing, available workforce by business confronts social changes that limit the ability of sizeable segments of the labor force to participate in full-time, traditionally structured work. The complexity of the changing labor market involving skill demand and labor shortages poses problems for the traditional methods of labor exchange. The availability of dependent care for women with children, elder care for persons with responsibility for elderly parents or disabled spouses, or both for the "sandwich"

generation, limits the extent to which these groups can contribute to the labor force. The cost of employee benefits, both health and retirement, and the demand for such benefits by employees have broad ramifications for social and economic policy. Addressing employment support issues is critical to comprehensive human resource and economic development policy.

Job Change Facilitation. The evolution of an increasingly complex and volatile labor market necessitates improved mechanisms for matching job requirements with worker skills. Changes in employer skill and occupational demands will require more proactive and precise methods for identifying qualified workers. Employers will need to broaden the geographic scope of their recruitment base to find the skilled workers they require. Individual workers will need access to job information that is timely and accurate, encompassing a broad geographic labor market. Systems for worker relocation will be essential for a fully flexible national labor force capable of expeditious response to the demands of a competitive global economy. Labor market exchange will become more important in an economic environment of loosening attachment of workers to a single employer, shifting skill demands, and emerging business advances.

Dependent Care. The changing responsibilities within the family structure created by rising participation in the workforce by women with children, an increase in households headed by single parents, and an aging population will alter traditional concepts of dependent care provision. With the growth of the labor force partially dependent upon the influx of women in their child-bearing years, the availability of work-hour child care will be a major factor in workforce recruitment and employment stability. Research has shown that as child care costs rise, employment among women with preschool-age children declines. Public and private systems for infant and preschool-age child care, after-school care for young students, and parental leave are current employment issues important to both workers and employers. Similarly, the aging of the American population and the workforce poses new questions for dependent care, as more workers assume the responsibility for elderly parents or disabled spouses.

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Employee Benefits. Rising health care costs have become a major concern to business, workers, and government. Escalating health care benefit costs are forcing employers to curtail health benefit plans or to reduce the extent of their contributions or coverage. Currently, more than 24 million adult workers, 70 percent of whom work full time, have no employer group health insurance. Reductions in health benefits will put many businesses at a competitive disadvantage in the recruitment and maintenance of a stable workforce. Protection from the economic consequences of catastrophic illness is important to the long-term economic security of the individual worker. Workers who are able to access the health care system have less time lost due to illness and enjoy a longer, more productive worklife.

The loosening attachment of workers to a single employer throughout their career has given rise to discussions about the current structure of retirement benefits. With workers expected to change jobs seven to ten times during their worklife, the issue of pension portability has gained in importance in recent years. Such turnover in employment will leave a growing segment of the American workforce unvested in pension plans to supplement social security. As workers shift jobs, the cost of employer-sponsored retirement plans may escalate as a result of reduced vesting periods. Recent labor negotiations have highlighted the growing importance of employee benefit packages, with non-salary related benefits comprising an ever-growing percentage of total negotiated compensation packages.

Conclusion

During the 1980s the nation's Governors committed time and resources to meeting the challenge of developing internationally competitive economies. The National Governors' Association has pursued initiatives that have produced educational reforms, focused attention upon the issues related to "Jobs, Growth, and Competitiveness" and outlined the challenges confronting an "America in Transition." Governors have pursued a number of programs and policies to enhance American competitiveness from educational reform to cooperative programs for diffusion of technology to innovative uses of tax and incentive policies for worker training and private investment in technology. Governors have taken the lead in addressing the broad public policy implications of developing more productive workers and competitive workplaces.

The Governors are now prepared to take the initiative to forge the necessary partnerships among business, labor, education, and government to focus all available resources on the American workplace to produce internationally competitive businesses and a world-class workforce. The Governors' Initiative on Excellence at Work will address the issues confronting the American economy, explore the economic development and human resource policy options and strategies available to states, and develop an action plan for facilitating economic excellence – excellence in production, excellence in product quality, and excellence in the workforce.

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